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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/423,207	11/03/1999	THORBJORN ANDERSSON	027650-836	6484

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ROBERT S. SWECKER
BURNS, DOANE, SWECKER & MATHIS, L.L.P.
PO BOX 1404
ALEXANDRIA, VA 22313-1404

EXAMINER

PATTERSON, MARC A

ART UNIT	PAPER NUMBER
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1772

DATE MAILED: 01/27/2003

17

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/423,207	Applicant(s) ANDERSSON ET AL.	
	Examiner Marc A Patterson	Art Unit 1772	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 07 November 2002.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,3 and 4 is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,3 and 4 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

WITHDRAWN REJECTIONS

1. The 35 U.S.C. 112 rejection of Claim 1, of record on page 2 of the previous Action, is withdrawn.

NEW REJECTIONS

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1, 3 and 4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kohn et al. (U.S. Patent No. 5,819,991) in view of Nakagawa et al (U.S. Patent No. 4,907,957).

With regard to Claims 1, 3 and 4, Kohn et al. disclose a bottle for metered dispensing of a liquid product comprising an intermediate layer of foamed plastic and outer, solid layers of plastic (column 1, lines 50 – 67; column 2, lines 1 – 12); the foamed and non – foamed layers are the same, and the foamed material is 10 – 30% less dense than the same material in the non – foamed state; the three layers are high density polyethylene (column 1, lines 55 – 67, column 2, lines 1 – 5); the two outer, surrounding layers have substantially the same layer thickness (column 1, lines 50 – 67; column 2, lines 1 – 12), and the outer skin thickness (and therefore weight) takes up 20% of the total thickness (and therefore weight; column 2, lines 51 – 58). Kohn et al. fail to disclose an intermediate layer comprising a blend of high and low density

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polyethylene, and an intermediate layer comprising a rigid high density polyethylene and ductile low density polyethylene.

Nakagawa et al. teaches the use of low density polyethylene as the foamed intermediate layer of a three a bottle having high density polyethylene as the non – foamed outer layers, for the purpose of imparting flexibility on the resulting bottle (column 5, lines 27 – 51; column 10, lines 8 – 34). Nakagawa also teaches that high density polyethylene is well – known in the art to be relatively rigid, and low density polyethylene to be relatively ductile (soft; column 5, lines 52 – 68; column 6, lines 1 – 5).

It therefore would have been obvious for one of ordinary skill in the art at the time Applicant's invention was made to have provided for a combination of 50% rigid high density polyethylene and 50% ductile low density polyethylene as the intermediate layer in Kohn et al. in order to impart flexibility on the resulting bottle as taught by Nakagawa et al.

With regard to the claimed aspect of the bottle being 'extruded / blow molded,' the bottle is extruded / blow molded (column 2, lines 29 – 31). However, the method of making the bottle (product – by – process) is given little patentable weight, as the scope of the claims falls within the limitations of Kohn et al. and Nakagawa et al. as discussed above. Applicant would need to demonstrate, by verified showing, the unexpected advantages accruing from the method of making the bottle as claimed.

ANSWERS TO APPLICANT'S ARGUMENTS

4. Applicant's arguments regarding the 35 U.S.C. 112 second paragraph rejection of Claim 1, of record on page 2 of the previous Action, have been considered and have been found to be persuasive. The rejections are therefore withdrawn.

Applicant's arguments regarding the 35 U.S.C. 103(a) rejection of Claims 1 and 3 – 4 as being unpatentable over Kohn et al. in view of Nakagawa et al. have been carefully considered but have not been found to be persuasive for the reasons set forth below.

Applicant argues, on page 4, that the rejection is improper because the intermediate foamed layer of Kohn et al. consists of a single polymer component. However, Kohn et al. does not teach that the intermediate layer disclosed only consists of one polymer layer; Kohn et al., in fact, teach that the foamed layer of their invention is a polyolefin, such as polypropylene, polyethylene, or their copolymerides (column 1, lines 66 – 67; column 2, lines 1 – 5); an intermediate foamed layer which contains all three components therefore reads on Kohn et al.

Applicant also argues, on page 4, that the one of ordinary skill in the art would not be motivated to combine Kohn et al. and Nakagawa et al. because the prior art does not suggest the desirability of combining the intermediate layer of Kohn et al. with the intermediate layer of Nakagawa et al. to arrive at the two – component intermediate layer of the claimed invention. However, if the desirability of the intermediate layer of Kohn et al. is suggested by Kohn et al., and the desirability of the intermediate layer of Nakagawa et al. is suggested by Nakagawa et al., the desirability of an intermediate layer which combines the properties (and therefore the components) of both intermediate layers is clearly suggested by the prior art.

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Applicant also argues, on page 6, that the expanded layer of Kohn et al is not intermediate between two outer layers of solid plastic. However, Kohn et al discloses that the expanded layer is intermediate between two layers of plastic, such as polyolefin (column 2, lines 6 – 12); furthermore, Kohn et al do not disclose that any portion of the plastic layers is present in the liquid state. The claimed aspect of the plastic layers being ‘solid’ therefore reads on Kohn et al.

Applicant also argues, on page 6, that Kohn et al fails to teach a layer of expanded plastic comprising a blend of high and low density polyethylene. However, as stated above, Nakagawa et al. teaches the use of low density polyethylene as the foamed intermediate layer of a three a bottle having high density polyethylene as the non – foamed outer layers, for the purpose of imparting flexibility on the resulting bottle (column 5, lines 27 – 51; column 10, lines 8 – 34). Nakagawa et al also teach that high density polyethylene is well – known in the art to be relatively rigid, and low density polyethylene to be relatively ductile (soft; column 5, lines 52 – 68; column 6, lines 1 – 5).

It therefore would have been obvious for one of ordinary skill in the art at the time Applicant’s invention was made to have provided for a combination of 50% rigid high density polyethylene and 50% ductile low density polyethylene as the intermediate layer in Kohn et al. in order to impart flexibility on the resulting bottle as taught by Nakagawa et al. It is also noted that, on page 3 of Paper No. 10, Applicant states that the terms ‘rigid’ and ‘ductile’ are merely intended to be descriptive, and not to limit the claims in any manner. The terms are therefore given little patentable weight.

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Applicant also argues, on page 6, that the rejection is improper because Kohn et al fail to disclose a foamed plastic layer wherein the ratio of the first polymer to the second polymer is between 1:3 and 3:1; the limitation, Applicant argues, cannot be realized by optimization. However, the rejection does not rely on optimization; as stated above, the combination of Kohn et al and Nakagawa et al discloses a foamed plastic layer wherein the ratio of the first polymer to the second polymer is 1:1, which is clearly between 1:3 and 3:1.

Applicant also argues, on page 7, that Kohn et al teach away from the combination of the plastic of the foamed layer with another plastic, because Kohn et al teach that only the density range and other features described assure that the requisite functions are filled. However, the 'density range' which is referred to is the range specified in column 3, lines 54 – 56 and column 4, lines 1 – 2; the density of the foamed material is at least 10% and at maximum 30% lower than the same material in its compact form. Kohn et al do not teach that the combination of high and low density polyethylene as the foamed layer precludes this density, therefore Kohn et al do not teach away from the combination of Kohn et al and Nakagawa et al.

Conclusion


5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Marc Patterson, whose telephone number is (703) 305-3537. The examiner can normally be reached on Monday through Friday from 8:30 AM to 5:00 PM. If attempts to reach the examiner by phone are unsuccessful, the examiner's supervisor, Harold

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Pyon, can be reached at (703) 308-4251. FAX communications should be sent to (703) 872-9310. FAXs received after 4 P.M. will not be processed until the following business day.

Marc A. Patterson, PhD.

Marc Patterson
Art Unit 1772


HAROLD PYON
SUPERVISORY PATENT EXAMINER
1772

1/23/03